

**CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD  
SAN DIEGO REGION**

**THIRD REVISION  
CLEANUP AND ABATEMENT ORDER NO. 89-50**

**REDEVELOPMENT AGENCY OF THE CITY OF SAN DIEGO  
303 MARKET STREET, SAN DIEGO  
PARCEL NO. 535-081-01-00  
BLOCK 94, LOTS A and B  
SAN DIEGO COUNTY**

California Regional Water Quality Control Board, San Diego Region (hereinafter Regional Board) finds that:

1. The Redevelopment Agency of the City of San Diego (hereinafter RACSD) owns the subject site at 303 Market Street, San Diego. Presently, RACSD leases the property for use as a parking lot. The site is within the San Diego Mesa Hydrographic Subunit (8.2) of the Coronado Hydrographic Unit (8.0).
2. The site is a part of the Marina Redevelopment Project in the center city area of the City of San Diego. The project is being administered by the Redevelopment Agency of the City of San Diego. Centre City Development Corporation (CCDC) is a nonprofit corporation established by the City of San Diego to administer downtown redevelopment projects, including the Marina Redevelopment Project.
3. In 1987, CCDC discovered a subsurface hydrocarbon plume near the intersection of Market Street and First Avenue. The subsurface plume is composed of petroleum hydrocarbon with a carbon chain which ranges from gasoline to diesel and appears to be an accumulation of several coalescing sources.
4. On January 14, 1988, the Regional Board received a technical subsurface investigation report dated June 1987, prepared by Applied Hydrogeologic Consultants for RACSD.
5. According to the report, historical information indicates that the subject property was occupied by a gasoline service station between 1946 and the mid-1970's and that both gasoline and diesel fuels were stored on site. Presently, there is no adequate information regarding the number of tanks installed, removed, or which remain at the site. A metal detection survey of the property was conducted and seven metallic objects, ranging in size from approximately 2.5 to 4 feet in diameter were detected.
6. Fifteen borings were drilled on the property and twenty-six soil samples were analyzed for fuel hydrocarbons. The sample analyses indicate gasoline and diesel grade petroleum hydrocarbon fuel contamination of the soil. The report also gave the following concentrations (in milligrams per kilogram) in the soil:

<u>Constituent</u>	<u>Concentration</u>
Benzene	7.6 mg/kg
Toluene	290 mg/kg
Total Xylene	740 mg/kg
Ethylbenzene	93 mg/kg
Total Petroleum Hydrocarbons	7400 mg/kg

These constituents are considered toxic and hazardous by the United States Environmental Agency (EPA) and California State Department of Health Services (DOHS).

7. Presently, the ground-water gradient is to the south. Floating "free" product (0.17 feet) was found on the ground water in monitoring well CC21. Significant soil contamination exists beneath the site and CC21 shows the presence of free product similar to the grade of petroleum hydrocarbons which have been historically stored and dispensed on site. This site is on the eastern margin of this hydrocarbon plume.
8. The *Comprehensive Water Quality Control Plan Report, San Diego Basin (9)* (Basin Plan) was adopted by this Regional Board on March 17, 1975; approved by the State Water Resources Control Board on March 20, 1975; and updated by the Regional Board on February 27, 1978; March 23, 1981; January 24 and October 3, 1983; August 27, 1984; and December 16, 1985. The updates were subsequently approved by the State Board.
9. The Basin Plan established no beneficial uses for surface or ground waters in the San Diego Mesa Hydrographic Subunit.
10. The Basin Plan established the following beneficial uses for San Diego Bay:
  - a. Industrial Service Supply
  - b. Navigation
  - c. Water Contact Recreation
  - d. Non-Contact Water Recreation
  - e. Ocean Commercial And Sport Fishing
  - f. Saline Water Habitat
  - g. Preservation of Rare and Endangered Species
  - h. Marine Habitat
  - i. Fish Migration
  - j. Shellfish Harvesting
11. The quality of the ground water of the San Diego Mesa Hydrographic Subunit and of the San Diego Bay water is subject to the provisions of the State Water Resources Control Board's Resolution No. 68-16, *Statement of Policy with Respect to Maintaining High Quality Waters in California*. This policy is incorporated in the Basin Plan. Under the terms and conditions for Resolution No. 68-16, the existing (predischarge) quality of ground water in the San Diego Mesa Hydrographic Subunit and the surface water of San Diego Bay must be maintained unless it is demonstrated that a decrease in water quality (1) will be consistent with maximum benefit to the people of the state, (2) will not unreasonably affect beneficial uses, and (3) will not result in water quality less than that prescribed in the Basin Plan or other adopted policies.
12. The Basin Plan contains the following prohibition:

"Dumping or deposition of oil, garbage, trash or other solid municipal, industrial or agricultural waste into natural or excavated sites below historic water levels or deposition of soluble industrial wastes at any site is prohibited, unless such site has been specifically approved by the Regional Board for that purpose."

The subject site has not been specifically approved by the Regional Board for the above purpose.

13. Section 13304(a) of the California Water Code states the following:

"Any person who has discharged or discharges waste into the waters of this state in violation of any waste discharge requirement or other order or prohibition issued by a regional board or the state board, or who has caused or permitted, cause or permits, or threatens to cause or permit any waste to be discharged or deposited where it is, or probably will be, discharged into the waters of the state and creates, or threatens to create, a condition of pollution or nuisance, shall upon order of the regional board clean up such waste or abate the effects thereof or, in the case of threatened pollution or nuisance, take other necessary remedial action."

14. RACSD purchased the site March 19, 1987. At the time RACSD purchased the site, it was contaminated with fuel hydrocarbons and other fuel components as described above in Finding No. 6. These wastes have continued to migrate through the soil, even though there is no evidence to suggest that further contaminants were introduced to the site after its purchase by RACSD. As a result of purchasing a site which was and continues to be contaminated as described herein, RACSD has permitted petroleum hydrocarbons to be discharged or deposited on the site where such wastes have been and probably will be discharged into the ground water. The on-going discharge of petroleum hydrocarbons to the ground water has resulted in pollution of the ground water and threatens to pollute waters of San Diego Bay for beneficial uses listed in Finding No. 10. Additionally, the on-going discharge violates Resolution 68-16 because the Regional Board finds that the decrease in ground-water quality is not consistent with the maximum benefit to the people of the state.
15. These discharges have polluted and threaten to further pollute ground water of the basin and threaten to pollute surface water of San Diego Bay.
16. Regional Board files indicate that the ground water has a total dissolved solids (TDS) concentration that ranges from 1,085 to 3,080 parts per million (ppm) and, under the federal definition, qualifies as a potential underground source of drinking water. The United States Environmental Protection Agency's (EPA) definition of an "underground source of drinking water" is found in Title 40, Code of Federal Regulations (40 CFR), Section 146.3, and states the following:

"Underground source of drinking water (USDW) means an aquifer or its portion:

- (1) (i) Which supplies any public water system; or
- (ii) Which contains a sufficient quantity of ground water to supply a public water system; and
  - (a) Currently supplies drinking water for human consumption;
  - or
  - (b) Contains fewer than 10,000 mg/l total dissolved solids;
  - and
- (2) Which is not an exempted aquifer."

As defined under 40 CFR Section 141.2(e) a "public water system" means:

"a system for the provision to the public of piped water for human consumption, if such system has at least fifteen service connections or regularly serves an average of at least twenty-five individuals daily at least 60 days out of the year."

Presently, the ground water is not being used as a drinking water source. However, some time in the future this water source may be utilized. The discharge of petroleum hydrocarbons degrades the existing water quality and renders it unusable for drinking water unless the ground water is treated.

17. The ground water beneath the site is in continuity with waters of the bay. The petroleum hydrocarbon concentrations are hazardous to marine life and may impact other beneficial uses of San Diego Bay, as described in Finding No. 10, if allowed to migrate to the bay.
18. The existence of soil and ground-water contamination at the site indicates that the tanks and/or associated piping from the former service station has leaked. Petroleum hydrocarbons have been and are being discharged to the ground water. These discharges constitute a continuing public nuisance in violation of Civil Code Section 3490. The discharges also violated Health and Safety Code Section 5411 and California Water Code Section 13304(a).
19. Civil Code Section 3490 prohibits the creation or continuation of a public nuisance. The courts have held that water pollution constitutes a public nuisance. In addition, Health and Safety Code Section 5411 prohibits the discharge of waste which will result in pollution, contamination, or nuisance. The past and on-going subsurface discharge of petroleum hydrocarbons has resulted in pollution and in threatened pollution.
20. For reasons explained above, the Regional Board finds RACSD has discharged and is discharging petroleum hydrocarbons at the site in violation of Section 13304(a) of the California Water Code.
21. Regional Board considers this property one of several properties which have contributed to the ground-water plume for which Cleanup and Abatement Orders will be issued to collectively mitigate the contamination.
22. This enforcement action is exempt from the provisions of the California Environmental Quality Act (Public Resources Code, Section 21000 et. seq.) in accordance with Section 15321, Chapter 3, Title 14, California Code of Regulations.

**IT IS HEREBY ORDERED**, that pursuant to Section 13304 of the California Water Code, the Redevelopment Agency of the City of San Diego (hereinafter the discharger) shall comply with the following directives:

1. The discharger shall conduct a subsurface investigation and submit the results in a report to this office, no later than August 31, 1989, or upon completion of excavation, which characterizes the vertical and horizontal extent of petroleum hydrocarbon

contamination in the soil and ground water (both free product and dissolved) resulting from the unauthorized release from the former service station at the subject site. The report shall contain the following information:

- a. A site map showing the location of all borings and monitoring wells.
- b. RACSD shall provide a true and accurate map which depicts all past tank locations and all associated piping and any underground utilities that might act as conduits along which petroleum hydrocarbons could migrate.
- c. The water levels and fuel product thicknesses in all wells on or immediately adjacent to the property (to the nearest 0.01 foot).
- d. A site map showing the contours and/or boundary of the soil contamination.
- e. A site map showing the hydrologic contours and the boundary of the free product plume and the dissolved product ground-water contamination.
- f. All soil samples should be analyzed for the following:
  - (1). Benzene, Toluene, Ethylbenzene, and total Xylenes (using EPA method 8020),
  - (2). Total Petroleum Hydrocarbons [using EPA method 418.1 and California Department of Health Services (CDOHS) method],
  - (3). Organic Lead (using CDOHS method),
  - (4). Polynuclear Aromatic Hydrocarbons (using EPA method 8100).
- g. All ground-water samples should be analyzed for the following:
  - (1). Benzene, Toluene, Ethylbenzene, and total Xylenes (using EPA method 8020)
  - (2). Total Petroleum Hydrocarbons (using CDOHS method)
  - (3). Total Lead (using EPA method 7421)
  - (4). Polynuclear Aromatic Hydrocarbons (using EPA method 8100).
2. The discharger shall submit a remedial action strategy proposal, no later than October 16, 1989, which addresses the removal and/or treatment of the soil contamination.
3. The discharger shall submit a remedial action strategy proposal, no later than November 30, 1989, which addresses the removal of any free product and the removal and/or treatment of the ground-water contamination.
4. The discharger shall take:
  - a. Effective remedial action to immobilize and remove any free product plume.

- b. Effective remedial action to immobilize and clean up petroleum hydrocarbon dissolved in the ground water to the following levels:

<u>Constituent</u>	<u>Cleanup Level</u>
Benzene	40 ppb
Toluene	5,000 ppb
Ethylbenzene	430 ppb
Total Xylenes	1,750 ppb

- c. Effective remedial action to remove and/or treat all soil contamination to a level which would prevent leaching of petroleum hydrocarbons to the ground water which would cause contamination in the ground water to exceed the cleanup levels stated in Directive 4(b) above.
5. The discharger shall submit monitoring reports to this office on a quarterly basis until, in the opinion of the Regional Board Executive Officer, the site has been cleaned up. The monitoring reports shall describe the progress made in the cleanup operations and shall demonstrate that the petroleum hydrocarbon discharged from the former service station has been and remains immobilized. The quarterly monitoring reports shall include, but not be limited to, the following information:
- A map of the site with hydrologic contours showing the ground-water flow pattern and the locations of all wells.
  - A map of the site showing the boundary of the free petroleum hydrocarbon product plume (if any).
  - The water levels and product thickness (if any) in all of the wells (to the nearest 0.01 foot).
  - A description of the remedial actions employed by the discharger.

The quarterly monitoring reports shall be submitted to this office in accordance with the following schedule:

<u>Reporting Period</u>	<u>Due Date</u>
June, July, August	September 30
September, October, November	December 30
December, January, February	March 30
March, April, May	June 30

6. The discharger shall dispose of all ground water and/or soil polluted with petroleum hydrocarbons in accordance with all applicable local, state, or federal laws and regulations.

7. After the discharger demonstrate to the Regional Board Executive Officer's satisfaction that the final cleanup levels have been achieved throughout the soil and ground-water contamination zones, the discharger shall continue to monitor the ground water and submit quarterly monitoring reports in accordance with Directive No. 5 of this Order for a period of one year. If at any time during this post-cleanup monitoring the data indicate that the final cleanup levels have not been maintained, the discharger shall immediately resume appropriate remedial cleanup actions. If the final cleanup levels have not been exceeded for the year of monitoring, then no further monitoring will be required.

Ordered by: Ladin H. Delaney  
Ladin H. Delaney  
Executive Officer

Dated: July 17, 1989

JPA

